IN THE CLAIMS:

The following is a complete listing of claims in this application.

1. (currently amended) A device for producing bypasses under pressure in fluid piping systems, of the type ~~constituted of~~ comprising a horizontal T-shaped body with a central radial conduit (1) which can be coupled at ~~its~~ a lower mouth (6) of the conduit to a seat or collar for joining with ~~the~~ a pipe (27) to be bypassed, and a side conduit with a mouth (7) for extracting the fluid from the bypass, the radial conduit (1) having a detachable access cover (2) at ~~its~~ an upper portion thereof, ~~characterized in that it comprises~~ the device comprising a perforation cutter (3), in the form of an inverted cup having teeth forming a toothed crown and, at ~~its~~ a portion opposite to the toothed crown (11), a coaxial cylindrical extension with a stepping in two consecutive threaded areas (32 and 33) of a decreasing diameter, one threaded area (33) being ~~suitable~~ constructed and arranged for ~~the~~ coupling of the cutter with a threaded area (10) existing in ~~the~~ an upper portion of the radial conduit; ~~and in that~~ said extension of the cutter (3) ~~has~~ comprising a hole (51) at ~~its~~ an upper base thereof connected to a feed tool, co-aided by the threaded area (32); ~~and in that it comprises~~ the device further comprising a tool for ~~the~~ handling and ~~feed~~ feeding of the cutter (3), ~~constituted of~~ comprising a body (17) which can be coupled to the upper portion of the radial conduit (1) with a shaft (22) which can be detached through a screw (21) operatively suitable for ~~the~~ extraction of the cutter (33) from the threaded area of ~~its~~ the seat in the upper portion and for the perforation of the pipe (27) to be bypassed.

2. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1,

~~characterized in that~~ wherein the ~~boring~~ teeth (11) ~~existing in the lower crown of the cutter (3)~~ form a boring diameter of greater dimensions than ~~the~~ a cylindrical outline (13) of the cutter (3).

3. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that it comprises~~ further comprising at the upper portion of the radial conduit (1) a neck (8) or coupling with an inner threaded area (10) for coupling of the cutter (3) and an outer threaded area (9) for coupling of a cover (2) or a perforation tool.

4. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 3, ~~characterized in that~~ wherein the outer threaded area (9) of the neck (8) has a gasket (5) with a cover (2) or with the perforation tool at ~~its~~ the base.

5. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 4, ~~characterized in that~~ wherein the perforation tool comprises a tubular body (17) which can be coupled to the outer thread (9) of the neck (8) by means of a mouth (53) and which has a longitudinally movable shaft (22) connected to a threaded screw (21), one end of this shaft (22) being connected in a detachable manner to the upper portion of the cutter (3) and the other end suitable for the coupling of a tool or rotating wrench.

6. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that~~ wherein the shaft (22) comprises a male connector (15) with a nut (16) for coupling to the upper end of the cutter (3)~~,~~ ~~and in that~~ said male connector (15) comprises a shape according to the hole (51) or cavity

existing in the upper portion of the cutter (3), ~~and in that~~ the nut (16) is suitable for its coupling with the threaded area (32) for fixing thereof, ~~and in that~~ the shaft (22) comprises a retention washer (23) for retaining said nut (16) preventing an incorrect assembly of the shaft with the cutter.

7. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that~~ wherein the body (17) ~~of the tool~~ has an inner chamber (26) after the mouth (53) connecting with the conduit (1) through the hole of the neck (8), ~~and in that it~~ the body has a valve (18) connecting said inner chamber (26) with the outside.

8. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 6, ~~characterized in that it comprises~~ further comprising a threaded screw (21) at the upper portion of the body (17), with a hollow core, ~~wherein~~ in which the longitudinally sliding shaft (22) is located, ~~and in that~~ said screw (21) comprises a thread (14) of a length L greater than the advancing shifting needed by the cutter (3) when perforating ~~it perforates~~ the pipe (27), ~~and in that it comprises~~ a pin (24) housed in the upper portion of the screw (21) ~~and~~ which can be positioned in a series of transverse holes (28) of the shaft (22) for joining ~~them~~ by interlinking, ~~and in that~~ the pin (24) having ~~has~~ a retention ring (25) at one end.

9. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 7, ~~characterized in that~~ wherein the body (17) has a bearing (20) and a gasket (19) around the shaft (22), both arranged between the inner chamber (26) and the upper screw (21).

10. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 8,

~~characterized in that~~ wherein the screw (21) comprises a circular groove (14-a) close to the lower end of the thread (14) to warn of the end of the thread.

11. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 8, ~~characterized in that~~ wherein the teeth (11) ~~of the cutter (3)~~ have screw threads (12) on ~~their~~ an inner outline which are suitable for firmly holding the perforated disc (52) and shavings (29)~~,~~ and ~~in that~~ said screw threads (12) are of the same pitch as the threaded area (14) of the screw (21).

12. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 2, ~~characterized in that in an embodiment alternative,~~ wherein the cutter (3) has a flared tapering (30) of an increasing nature and a larger diameter than the outer outline (13) of the cutter and the diameter of said toothed crown (11) operatively suitable for plugging the opening made in pipe (27) and carrying out the function of interrupting the fluid.

13. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that~~ wherein a first of the two threaded areas ~~area~~ (32) has a notably different pitch than a second of the two threaded ~~area~~ areas (33).

14. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 3, ~~characterized in that~~ wherein the threaded area (33) of the cutter has a groove next to ~~its~~ the base thereof in which there ~~exists~~ is disposed a gasket (4) compressible with the neck (8) when said cutter (3) is in idle position coupled ~~to it~~ thereto.

15. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 3,

~~characterized in that it comprises~~ further comprising an anti-release nut (31) which can be coupled to the threaded area (32) of the cutter and supported on the mouth of the neck (8) of the conduit (1), which can be covered with the cover (2).

16. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 3, ~~characterized in that in an alternative embodiment, it comprises~~ further comprising a cover (55) fitted on the neck (8), ~~there being around it~~ with a cylindrical sleeve (54) encircling ~~it~~ the cover, said sleeve being extended on the radial conduit (1), suitable for their joining by heat fusion, gluing, welding or ~~any~~ other permanent or semi-permanent means.

17. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that it comprises~~ further comprising a protective arch (56) on the body (17) of the tool, projecting from the shaft (22) outside of said body (17)~~,~~; ~~and in that~~ the arch (56) ~~has~~ having a U shape and ~~its~~ a length ~~is~~ equal to or greater than the length of the shaft (22) in maximum extension of the body (17); ~~and in that~~ the arch (56) ~~is~~ being arranged on either side of the trajectory of said shaft (22).

18. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that it comprises~~ further comprising a series of windows (57) or through holes in the body of the cutter (1) or cutting tool, operatively suitable for connecting said pipe and the space behind the radial conduit (1) and the bypass in general during the perforation of the inside of the pipe (27); ~~and in that~~ said windows (57) ~~are preferably~~ being arranged in the surrounding outline (13) of the cutter (3).

19. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that there is~~ further comprising a cylindrical or tapered male connector (61) on said extension (33) of the cutter (3) at its upper portion connected to a mouth (64) of the shaft (22) of the perforation tool connected by means of a pin (62)~~,~~ or clip ~~or the like~~.

20. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that~~ wherein the body (17) of the perforation tool has two valves (18 and 62) for coupling the pressurization mechanism and testing the bypass and a gas gauge for verification in an independent manner.

21. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 19, ~~characterized in that~~ wherein the pin (62) connected to the male connector (61) and the mouth (64) of the shaft (22) comprises a thread or locking means.

22. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 5, ~~characterized in that~~ wherein the shaft (22) comprises in ~~its~~ a shank a groove (67) or connection close to the mouth (64), between the chamber (26) and the outside, bridging the gasket (19) and the bearing (20) through the cavity of the screw (21) when said shaft (22) is coupled to the cutter (3) arranged on the neck (8) operatively suitable for preventing a false measurement of ~~the~~ bypass leak-tightness due to ~~the~~ plugging ~~effect~~ of said cutter (3) warning ~~the operator of the outlet~~ of pressurization fluid through said groove (67) and the cavity of the screw (21).

23. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1,

~~characterized in that~~ wherein the cutter (3) comprises overdimensioned threaded projections (60) at ~~its~~ an inner outline and behind the teeth (11), with the screw threads (12) being interrupted by spaces without screw threads.

24. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that~~ wherein the teeth (11) ~~existing~~ in the outline of the cutter (3) are separated by small spaces (59).

25. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 3, ~~characterized in that~~ wherein the thread (9) of the neck (8) has a longitudinal groove (58) operatively suitable for preventing pressurization of the chamber formed between the cover (2) and the neck (8) due to a residual leak.

26. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 19, ~~characterized in that it comprises~~ further comprising a locking and anti-release pin (65) with an elastic retention ring~~,~~ or clip ~~or the like~~, housed in the transverse hole of the male connector (61) of the cutter (3), under the cover (2).

27. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 19, ~~characterized in that in an embodiment alternative, it comprises~~ further comprising a retention clip~~,~~ or catch ~~or the like~~ housed in the transverse hole of the male connector (61) of the cutter (3), under the cover (2).

28. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the body of~~ the T-shaped body ~~bypass is constituted of~~ comprises ~~a conventional~~ T-shape (34) with male ends having a

neck (36) connected with the cutter (3) and the cover (2) at the open end (35) of the radial conduit by means of welding~~,~~ or gluing ~~or the like~~.

29. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the body of~~ the T-shaped body ~~bypass is constituted of~~ comprises a T-shape with female ends (37) and a male bypass conduit (38), to which the neck (39) and the seat (40) or base which can be coupled to the pipe are joined by welding or gluing.

30. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the body of~~ the T-shaped body ~~bypass is constituted of~~ comprises a T-shape (41) manufactured in one piece ~~for the application,~~ which ~~from the beginning,~~ incorporates the neck (42).

31. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the body of~~ the T-shaped body ~~bypass is constituted of~~ comprises a T-shape (43) manufactured in one piece ~~for the application,~~ which incorporates the neck (44) and the base (45), ~~from the beginning,~~ to couple to the pipe (27) to be bypassed.

32. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the~~ a lower male mouth (47) of the ~~T-shape~~ T-shaped body is welded or glued to a collar with a female mouth (48).

33. (currently amended) A device for producing bypasses under pressure in fluid piping systems according to claim 1, ~~characterized in that in an embodiment alternative,~~ wherein ~~the~~ a lower male mouth (47) of the ~~T-shape~~ T-shaped body is connected to the collar (48) by means of welding or gluing or by means of an intermediate sleeve (50).